

REMARKS/ARGUMENTS

Responsive to the Final Rejection mailed September 7, 2006, Applicant attaches proposed amendments to claims 26 and 28, cancels claim 55 as redundant with claim 28, cancels claims 56 and 57 without prejudice to the possible filing of a divisional application with method claims and adds new claims 58, 59 and 60 dependent upon claim 26 and adding additional features.

The Applicant, Peter Wagner, and the undersigned appreciate Examiner Conley conducting a personal interview with them on November 28, 2006 during which the claims were discussed. The interview summary notes the claims that were discussed. Claims 58 and 59 then shown were two versions of the same claim scope and the claim 58 version thereof has been selected while the claim 59 version thereof was suppressed. New claim 59 now is a combination of amended claim 26 with the additional features of the temperature sensor as in claim 28. During the interview, the patentability of these claims over the primary cited reference to Sanderson, Patent 4,349,118, as well as over Applicant's prior Patent 5,352,416, were discussed. The Examiner indicated that it appeared that claims 26 and 28 distinguish from Sanderson, but that further search and consideration would be required.

Further, the Applicant demonstrated a sample of an actual apparatus according to the invention.

Turning to the Final Office Action, claims 26-29, 31 and 55-57 were rejected under 35 U.S.C. §102.

As to claims 26 and 28 rejected over Sanderson, the herein added limitation of claim 26 and the herein added limitation of claim 28 are neither shown nor suggested in Sanderson. The principle of operation of Sanderson is quite different.

With reference to claim 26, Applicant's valve body is movable in response to a pressure increase outside the container and outside the valve arrangement. In Sanderson in contrast, the valve body is moved either manually or under the effect of its own resilience when a stop is released, and the presence or absence of pressure outside the container and outside the valve

arrangement is not needed and is not the occurrence to which the valve body is responsively movable.

Further as to claim 26, Applicant's sensor is coupled to a stop and the sensor is operable to urge the stop away from the stop position based on a set temperature, without also causing the valve to close the container. It is submitted that Sanderson neither shows nor suggests this.

The Examiner's comments in the Office Action particularly directed to claim 26 do not take these additional elements of claim 26 or the arguments concerning them into account, and it is submitted that claim 26 is allowable.

As to claim 28, Applicant's temperature sensor is enclosed in its enclosure, which is separate from the container, and the enclosure is in the valve arrangement. Further, that sensor includes a valve closure which is closable independently of the valve arrangement to the container, enabling a desired sequence of sterilization steps to take place and enabling avoidance of premature closing of the valve arrangement and also of the valve closure which might interfere with proper sterilization for a recommended time period. As the claim notes, because the temperature sensor is insulated from the sterilizer environment containing the container, the temperature sensor can be protected from premature cooling, which is another benefit of the structure of the invention. The Examiner's comments in the Office Action directed to claim 78 do not take into account this modification of claim 28 and it is submitted that claim 28 is allowable.

All of the other claims that received this rejection are dependent upon claim 26 or 28. Because those two claims are distinguishable from Sanderson, the other rejected claims dependent upon claims 26 and 28 also should be allowable. Consideration of the other grounds of rejection of those dependent claims has been rendered unnecessary by the amendment of parent claims 26 and 28.

New claims 58-60 are all dependent upon claim 26 and each provides further detail. At least because they are dependent upon claim 26, those claims are allowable.

The indication of allowability of claims 30 and 32-54 is noted and appreciated. Those claims are retained in their dependent form, because they are dependent on either claim 26 or 28.

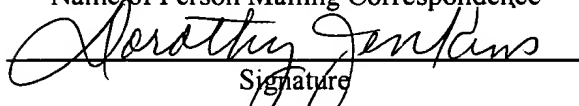
With the amendments to the claims and the foregoing remarks, it is submitted that remaining claims 26-54 and 58-60 are allowable and their allowance is requested.

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Signature

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Claims 1-25 (Canceled)

26. (Currently Amended) A sterilization container for holding items to be passed through a sterilization process that includes a conditioning phase, a high temperature sterilization exposure phase, a vacuum drying phase and a ventilation phase, the container capable of remaining hermetically sealed and maintaining a vacuum established during the sterilization process;

the container having a valve arrangement permitting a medium exchange between an inside and an outside of the sterilization container during the sterilization process, the valve arrangement comprising:

an open position of the valve arrangement to permit the exchange of the medium and a closed position of the valve arrangement to prevent the exchange of the medium;

a valve body movable in response to a pressure flow increase outside the container and outside the valve arrangement, to urge the valve arrangement to the closed position;

a stop in the valve arrangement, the stop having a stop position to prevent the valve arrangement from moving to the closed position; and

a temperature sensor coupled to the stop and operable to urge the stop away from the stop position based on a set temperature without also causing the valve to close the container reached just before or during the ventilation phase.

27. (Previously Presented) The sterilization container according to claim 26, wherein the temperature sensor exhibits hysteresis based on temperature.

28. (Currently Amended) A sterilization container for holding sterilized items to be passed through a sterilization process in a sterilizer that includes a conditioning phase, a high temperature sterilization exposure phase, a vacuum drying phase and a ventilation phase, the container capable of remaining hermetically sealed and maintaining a vacuum established during the sterilization process; the container having a valve arrangement permitting an exchange of a medium between the sterilizer and the sterilization container during the sterilization process, the valve arrangement comprising:

an open position of the valve arrangement to permit the exchange of the medium and a closed position of the valve arrangement to prevent the exchange of the medium; and

a temperature sensor in the valve arrangement and the sensor being enclosed in an enclosure separately from the container, the sensor enclosure includes a valve closure; the valve closure to the sensor enclosure being closable independently of the valve arrangement to the container, which insulates the temperature sensor from a sterilizer environment in which the container is disposed, wherein the temperature sensor is protected from premature cooling;

the temperature sensor being operable to prevent the valve arrangement from moving to the closed position until a set temperature cycle of the sterilizer is complete;~~wherein the temperature sensor is protected from premature cooling.~~

29. (Previously Presented) The sterilization container according to claim 28, wherein the temperature sensor exhibits hysteresis based on temperature.

30. (Previously Presented) The sterilization container according to claim 26, wherein the temperature sensor further comprises:

a snap-disk stack having a plurality of snap disks each having a shape that varies responsive to temperature changes; and

at least two of the snap-disks in the snap-disk stack having different respective temperature behaviors.

31. (Previously Presented) The sterilization container according to claim 26, further comprising:

a recess at a bottom portion of the sterilization container; and

the valve arrangement being located in the recess and operable to permit condensate formed during the sterilization process to drain from the bottom portion through the valve arrangement.

32. (Previously Presented) The sterilization container according to claim 31, further comprising:

a central wall section in the bottom portion and having a conical shape that is tapered inward in an upward direction;

perforation openings in the central wall section to permit condensate to drain through the perforation openings when the valve arrangement is in the open position;

an annular valve seat surrounding the perforation openings; and

the valve body having a valve plate and a valve ring on the valve plate, the valve ring cooperating with the annular valve seat to seal the sterilization container.

33. (Previously Presented) The sterilization container according to claim 32, wherein the temperature sensor further comprises:

a snap-disk stack having a plurality of snap disks each having a shape that varies responsive to temperature changes; and

at least two of the snap-disks in the snap-disk stack having different respective temperature behaviors;

a housing in a center section of the valve plate and accommodating the snap-disk stack; and the valve arrangement further comprises:

a valve ball coupled to the snap-disk stack and movable in response to changes in the shape of the snap disks in the snap-disk stack; and

a valve-seat ring in the housing and cooperative with the valve ball to form a seal with the valve ball when the valve ball is moved in response to changes in the shape of the snap disks in the snap-disk stack.

34. (Previously Presented) The sterilization container according to claim 33, further comprising:

a bellows having an upper and a lower end and arranged around the housing in the valve arrangement;

a valve cap in the valve arrangement releasably fastened to the bottom portion of the sterilization container; and

the lower end of the bellows being connected to the valve plate and the upper end of the bellows being secured to the valve cap.

35. (Previously Presented) The sterilization container according to claim 34, further comprising:

- an opening in the bottom portion of the sterilization container; and
- a protrusion on the valve cap being shaped to fit in the opening and be releasably fixed in place.

36. (Previously Presented) The sterilization container according to claim 33, further comprising:

- a housing lid on an upper portion of the housing in the valve arrangement; and
- a blocking spring on the housing lid and having a blocking pin, the blocking spring urging the blocking pin into a position to cooperate with the stop.

37. (Previously Presented) The sterilization container according to claim 36, wherein the blocking spring is positioned to permit the valve ball to act against the urging of the blocking spring to shift the blocking pin to a release position to prevent cooperation between the blocking pin and the stop when the valve ball is moved in response to changes in the shape of the snap disks in the snap-disk stack.

38. (Previously Presented) The sterilization container according to claim 33, further comprising:

- a ventilation outlet in a bottom portion of the housing for ventilating the housing;
- a ventilation opening in the valve plate communicating with the ventilation outlet; and
- an outlet sealing disk cooperating with the ventilation outlet to form a check valve in the housing.

39. (Previously Presented) The sterilization container according to claim 34, further comprising:

a vent opening in the valve plate communicating with a region enclosed by the bellows;
a vent sealing disk cooperating with the vent opening to form a check valve in the region enclosed by the bellows; and
a leaf spring on the valve plate arranged to provide preloading to urge the vent sealing disk to a seal position to close the vent opening.

40. (Previously Presented) The sterilization container according to claim 38, further comprising:

two coaxial cup-shaped parts, one cup-shaped part being screwed within the other cup-shaped part to form the housing in the valve arrangement; and
an annular end of the one cup-shaped part contacts the outlet sealing disk.

41. (Previously Presented) The sterilization container according to claim 36, further comprising an extension of the blocking pin cooperating with the valve ball to shift the blocking pin to a release position against the urging of the blocking spring when the valve ball is moved.

42. (Previously Presented) The sterilization container according to claim 33, further comprising:

a ventilation outlet in a bottom portion of the housing for ventilating the housing;
a ventilation opening in the valve plate communicating with the ventilation outlet; and
another valve ball coupled to the snap-disk stack and positioned to block the ventilation outlet in response to changes in the shape of the snap disks in the snap-disk stack.

43. (Previously Presented) The sterilization container according to claim 32, further comprising a baffle plate having a conical shape tapered inward and upward on the valve plate below and beneath the perforation openings for deflecting condensate drained through the perforation openings.

44. (Previously Presented) The sterilization container according to claim 30, wherein the snap disks having different respective temperature behaviors are paired together and the paired snap disks have a same curvature configuration at room temperature.

45. (Previously Presented) The sterilization container according to claim 44, further comprising two snap-disk pairs in the snap-disk stack, one pair being curved concavely upward in the snap-disk stack and another pair being curved convexly upward in the snap-disk stack.

46. (Previously Presented) The sterilization container according to claim 45, further comprising a steel disk curved convexly upward with temperature and pressure resistant curvature on a top of the snap-disk stack and having the valve ball arranged on a center part of the steel disk.

47. (Previously Presented) The sterilization container according to claim 45, further comprising:

a first steel disk curved convexly upward with temperature and pressure resistant curvature supporting the snap-disk stack; and

a second steel disk curved concavely upward with temperature and pressure resistant curvature and disposed between the two snap-disk pairs.

48. (Previously Presented) The sterilization container according to claim 30, wherein one of the snap-disks in the snap-disk stack has a temperature behavior of changing shape at about 115°C during heating and changing shape under hysteresis at about 95°C during cooling.

49. (Previously Presented) The sterilization container according to claim 30, wherein one of the snap disks in the snap-disk stack has a temperature behavior of changing shape at greater than about 115°C during heating and does not change shape again until cooled to about 50°C under hysteresis.

50. (Previously Presented) The sterilization container according to claim 49, wherein the one snap disk changes shape at about 117°C during heating.

51. (Previously Presented) The sterilization container according to claim 49, wherein the one snap disk does not change shape again until cooled in the range of from about 30°C to about 50°C under hysteresis.

52. (Previously Presented) The sterilization container according to claim 42, further comprising:

a steel disk curved convexly upward with temperature and pressure resistant curvature supporting the snap-disk stack; and

the another valve ball arranged on the steel disk.

53. (Previously Presented) The sterilization container according to claim 34, further comprising:

a lower annular flange on the bellows extending outward from the bellows; and

a distance piece between the lower annular flange and the valve plate to connect the bellows to the valve plate.

54. (Previously Presented) The sterilization container according to claim 42, further comprising:

a rim of the sterilization container having a trough with a vertical surface and a horizontal surface;

a container lid shaped to cooperate with the rim to enclose a top of the sterilization container;

a circumferential groove in the container lid;

a sealing ring arranged on a circumferential edge of the container lid and having a leg arranged on a radially inward portion of the sealing ring;

the leg being shaped to be received in the groove of the container lid; and

the sealing ring provides a seal between the container lid and the vertical and horizontal surfaces of the trough.

55-57. (Canceled).

58. (New) The sterilization container according to claim 26, wherein the valve arrangement in the closed position completely prevents the exchange of the medium between outside and inside the container and wherein the container includes no other elements enabling the exchange of medium when the valve arrangement is in the closed position.

59. (New) The sterilization container according to claim 26, wherein the temperature sensor is enclosed in an enclosure separately from the container, the sensor enclosure includes a valve closure; the valve closure to the sensor enclosure being closable independently of the valve arrangement to the container, which insulates the temperature sensor from a sterilizer environment in which the container is disposed, wherein the temperature sensor is protected from premature cooling;

the temperature sensor being operable to prevent the valve arrangement from moving to the closed position until a set temperature cycle of the sterilizer is complete

60. (New) The sterilization container according to claim 26, wherein the valve arrangement when open is only urged to a closed position by the pressure increase around the container and the valve arrangement.